

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for ~~providing enabling~~ access to a data repository, ~~the data repository including any combination of relational databases and directory services, wherein data contained within the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute, from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein~~ the application ~~utilizing~~ utilizes object oriented programming ~~that includes an object class and having an object property that have a~~ different ~~in~~ format than the corresponding at least one schema class and schema attribute utilized by the ~~data repository~~, the method comprising:

providing an interface interposed between the object-oriented application and the data repository;
receiving from the application, at ~~an the interface interposed between the application and the repository~~, an access command, wherein the access command identifies an object class and an object property of the object class in a format specific to the application ~~and that is but which format is~~ different than a format utilized by the repository to define a corresponding schema class and schema attribute;

translating, at the interface, the access command to a ~~translated reformatted~~ access command using the syntax and schema of the data repository, wherein the translated access command identifies the schema class and the schema attribute of the data repository which corresponds to the object class and the object property within the application, wherein translating the access command to a ~~translated reformatted~~ access command comprises:

at least one of reading a mapping, accessible to the interface, of object class and object property information to schema class and schema attributes, or reading metadata contained within the object class that identifies the object class and property of the object class and that links the object class and object property of the object class to the corresponding schema class and schema attribute within the data repository, and wherein the identified object class is defined by a class definition having therein a definition of the object property and at least one metadata tag associated with the definition of the object property which identifies the schema attribute corresponding to the object property; and
reformatting the access command into a command using the proper syntax and schema understood by the data repository and which can be serviced directly by the repository.

~~transmitting the translated access command to the repository to obtain access to the repository.~~

2. (Previously Presented) The method according to claim 1, wherein translating the access command to a translated access command further comprises:

modifying the access command by removing a reference to the object property of the object class and by adding to the access command a reference to the schema attribute.

3. (Previously Presented) The method according to claim 2, wherein the step of translating the access command to a translated access command further comprises altering a format of the command to a different format that the repository is capable of processing to grant access to the repository.

4. (Original) The method according to claim 3, wherein the step of translating the access command to a translated access command further comprises employing an application programming interface to process an intermediate command derived from the access command.

5. (Cancelled).

6. (Original) The method of claim 1, wherein the repository is an LDAP-compliant directory service, and wherein the schema is in accordance with the LDAP protocol.

7. (Previously Presented) The method of claim 1, wherein the repository is an LDAP-non-compliant repository, and wherein the schema, including the schema class and the schema attribute are implicit within the non-compliant repository.

8. (Original) The method according to claim 7, further comprising extracting the implicit schema and recording it as an express schema.

9. (Previously Presented) The method according to claim 1 further comprising:
receiving a response from the repository pursuant to transmitting the translated access command to the repository, wherein the received response identifies the schema class and schema attribute ;
translating the received response to a translated response, wherein the translated response identifies the object class and object property in a format specific to the application and that is different than a format utilized by the repository to define the corresponding schema class and schema attribute ;
and
fulfilling the access command received from the application by transmitting the translated response to the application.
10. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method according to claim 1.
11. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method according to claim 2.
12. (Cancelled).
13. (Previously Presented) The method according to claim 1, wherein transmitting the translated access command to the repository to obtain access to the repository comprises transmitting the translated access command to an intermediary API that transmits a corresponding translated access command to the repository.
14. (Cancelled).
15. (Original) The method according to claim 1, wherein the access command is selected from the group consisting of a read command, a write command, and a search command.

16. (Currently Amended) A computer program product comprising a computer-readable storage medium having recorded thereon computer-executable instructions which, when executed, implement the method recited in claim 1.

~~A directory interface for providing access to a data repository from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein the application utilizes object oriented programming that includes an object class and an object property that have a different format than the corresponding at least one schema class and attribute utilized by the repository, the directory interface comprising:~~

~~computer-executable instructions for implementing a method that includes:~~

~~receiving from the application, at an interface interposed between the application and the repository, an access command, wherein the access command identifies an object class and an object property of the object class in a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute;~~

~~translating, at the interface, the access command to a translated access command, wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property, wherein translating the access command to a translated access command includes reading a mapping within the object class that identifies the object property of the object class and links the object property of the identified object class to the corresponding schema attribute, and wherein the object class is defined by a class definition having therein a definition of the object property and at least one metadata tag associated with the definition of the object property which identifies the schema attribute corresponding to the object property; and~~

~~transmitting the translated access command to the repository to obtain access to the repository.~~

17. (Currently Amended) The computer program product according to claim 16, wherein translating the access command is performed by an application programming interface.

18. (Currently Amended) The computer program product according to claim 17, wherein the repository is LDAP-compliant and wherein the application programming interface of the repository interface comprises an LDAP API.

19-21. (Cancelled).

22. (Currently Amended) A graphical mapping tool embodied on a computer-readable medium for associating a property of a class with an attribute of a schema class of a repository schema, the mapping tool comprising computer-executable instructions which, when executed, enable a method comprising:

~~computer-executable instructions for presenting a first graphical user interface displaying for user selection of~~ a plurality of selectable object classes to be mapped to and displaying a plurality of selectable schema classes and for receiving a user selection of at least one selectable object class and at least one selectable schema class from the graphical user interface;

receiving input to the first graphical user interface selecting an object class from the plurality of object classes and selecting a schema from the plurality of schema classes;

~~computer-executable instructions for in response to the selection of the object class and schema class, presenting a second graphical user interface displaying the properties of the object class and the attributes of the schema class for user selection of at least one selectable property of a selected object class and at least one selectable attribute of a selected schema class and for receiving a user selection of a selected object property and a selected schema attribute;~~

receiving input to the second user interface selecting a property from the properties of the object class and selecting an attribute from the attributes of the schema class;

in response to the input received to the second user interface, mapping the selected property to the selected attribute; and

~~computer-executable instructions for in response to the mapping, inserting metadata within a definition of the selected object class, the metadata associating the selected object property with the selected schema attribute in response to receiving a user selection at the second graphical user interface of the selected object property and the selected schema attribute.~~

23. (Previously Presented) A mapping tool as recited in claim 22, wherein the second graphical user interface is only presented after first receiving user input selecting said at least one selectable object class and said at least one selectable schema class from the graphical user interface.